

Notice of Allowability

Application No.

10/735,113

Examiner

Shawn Gu

Applicant(s)

ILLIKKAL ET AL.

Art Unit

2189

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Appeal Brief filed on 18 September 2006 and the telephonic interview on 13 Oct 2006.
2. ☒ The allowed claim(s) is/are 1,2,4-9,11-13,15-17,19 and 20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>20061011</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

Response to Amendment

1. This Office action is in response to the appeal brief filed on 18 September 2006. Claims 1, 2, 4-9, 11-13, 15-17, 19 and 20 have been allowed. Claims 3, 10, 14 and 18 have been cancelled.

Examiner's Amendment

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Cory Claassen [Reg #: 50,296] on 13 October 2006.

In the Claims, the following amendments have been made:

In claim 8, line 2, insert "recordable" before "machine".

In claim 12, line 2, insert "recordable" before "machine".

In claim 12, line 1, replace "The" with "A".

Statement of Reasons for Allowance

3. The following is an examiner's statement of reasons for allowance:

Regarding the independent claims 1, 8, 12 and 16, the Examiner maintains the previous argument that Sano et al. [US 6,912,602 B2] in further view of Patterson and Hennessey [Computer Architecture] (hereinafter "Patterson") anticipates the limitation "assigning a first processor of the plurality of processors to the first processor according the following relationship:

$$\text{Processor Assignment} = \text{Descriptor_Position} \bmod N,$$

Where Descriptor_Position is a descriptor ring position of the first descriptor and N is a total number of the plurality of processors." The reasoning for the argument is already presented in the previous Office actions.

However, the Examiner rejected the claims by interpreting the limitation "a striping policy to prevent false sharing of a cache line between a plurality of processors" as an indirect result of combining Sano et al. and Patterson (see Non-final Office action, page 5, rejection of claims 1, 8, 12 and 16). While it would be true that false sharing is avoided by combining the references, there is not however an explicit striping policy implementation in either of the references intended for this end result. Therefore, the combination of Sano et al. and Patterson does not teach that the relationship shown above which is used to assign processors to descriptors is in fact part of an implemented striping policy designed to prevent false sharing of cache lines. The rejections of claims 1, 8, 12 and 16 are therefore redrawn.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

Art Unit: 2189

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

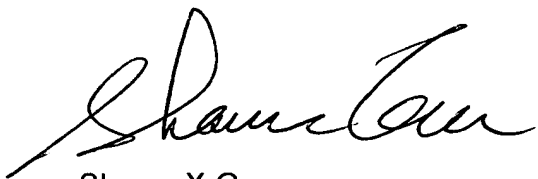
4. Applicant's arguments have been fully considered and are persuasive. The rejections have been withdrawn.

Conclusion

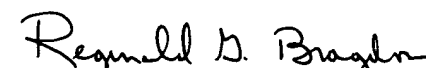
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawn Gu whose telephone number is (571) 272-0703. The examiner can normally be reached on 9am-5pm, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Reginald Bragdon can be reached on (571) 272-4204. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shawn X Gu
Patent Examiner
Art Unit 2189


REGINALD BRAGDON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

12 October 2006